

# Certaine plaine and easie DEMONSTRATIONS

Of divers Easie wayes and meanes for  
the Improving of any manner of barren Land,  
although the same bee not worth  
xij.d. the Acre.

And shewing how to make the same become  
worth XX.s. XXX.s. or XL.s. the  
Acre yearly.

*Published for the Increasing of the Wealth*  
and Prosperitie of the Nation, and the be-  
nefit of the Poore, and of all those as are  
Owners of any barren  
Land.



LONDON,

Printed by T. F. and are to be sold by William Ley, at  
his Shop at *Pauls-Chaine* neare *Pauls Church-*  
yard, 1657.

Certain place and date

DEMOMSTRATIONS

the improvement of the means of inland navigation and the extension of the railway system.

the importance of any number of other laws.

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And they're how to make the face

Adm. J. 193.242.88

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3. 1944. 1945. 1946. 1947. 1948. 1949. 1950. 1951. 1952. 1953. 1954. 1955. 1956. 1957. 1958. 1959. 1960. 1961. 1962. 1963. 1964. 1965. 1966. 1967. 1968. 1969. 1970. 1971. 1972. 1973. 1974. 1975. 1976. 1977. 1978. 1979. 1980. 1981. 1982. 1983. 1984. 1985. 1986. 1987. 1988. 1989. 1990. 1991. 1992. 1993. 1994. 1995. 1996. 1997. 1998. 1999. 2000. 2001. 2002. 2003. 2004. 2005. 2006. 2007. 2008. 2009. 2010. 2011. 2012. 2013. 2014. 2015. 2016. 2017. 2018. 2019. 2020. 2021. 2022. 2023. 2024. 2025. 2026. 2027. 2028. 2029. 2030. 2031. 2032. 2033. 2034. 2035. 2036. 2037. 2038. 2039. 2040. 2041. 2042. 2043. 2044. 2045. 2046. 2047. 2048. 2049. 2050. 2051. 2052. 2053. 2054. 2055. 2056. 2057. 2058. 2059. 2060. 2061. 2062. 2063. 2064. 2065. 2066. 2067. 2068. 2069. 2070. 2071. 2072. 2073. 2074. 2075. 2076. 2077. 2078. 2079. 2080. 2081. 2082. 2083. 2084. 2085. 2086. 2087. 2088. 2089. 2090. 2091. 2092. 2093. 2094. 2095. 2096. 2097. 2098. 2099. 2100. 2101. 2102. 2103. 2104. 2105. 2106. 2107. 2108. 2109. 2110. 2111. 2112. 2113. 2114. 2115. 2116. 2117. 2118. 2119. 2120. 2121. 2122. 2123. 2124. 2125. 2126. 2127. 2128. 2129. 2130. 2131. 2132. 2133. 2134. 2135. 2136. 2137. 2138. 2139. 2140. 2141. 2142. 2143. 2144. 2145. 2146. 2147. 2148. 2149. 2150. 2151. 2152. 2153. 2154. 2155. 2156. 2157. 2158. 2159. 2160. 2161. 2162. 2163. 2164. 2165. 2166. 2167. 2168. 2169. 2170. 2171. 2172. 2173. 2174. 2175. 2176. 2177. 2178. 2179. 2180. 2181. 2182. 2183. 2184. 2185. 2186. 2187. 2188. 2189. 2190. 2191. 2192. 2193. 2194. 2195. 2196. 2197. 2198. 2199. 2200. 2201. 2202. 2203. 2204. 2205. 2206. 2207. 2208. 2209. 2210. 2211. 2212. 2213. 2214. 2215. 2216. 2217. 2218. 2219. 2220. 2221. 2222. 2223. 2224. 2225. 2226. 2227. 2228. 2229. 2230. 2231. 2232. 2233. 2234. 2235. 2236. 2237. 2238. 2239. 2240. 2241. 2242. 2243. 2244. 2245. 2246. 2247. 2248. 2249. 2250. 2251. 2252. 2253. 2254. 2255. 2256. 2257. 2258. 2259. 2260. 2261. 2262. 2263. 2264. 2265. 2266. 2267. 2268. 2269. 2270. 2271. 2272. 2273. 2274. 2275. 2276. 2277. 2278. 2279. 2280. 2281. 2282. 2283. 2284. 2285. 2286. 2287. 2288. 2289. 2290. 2291. 2292. 2293. 2294. 2295. 2296. 2297. 2298. 2299. 2300. 2301. 2302. 2303. 2304. 2305. 2306. 2307. 2308. 2309. 2310. 2311. 2312. 2313. 2314. 2315. 2316. 2317. 2318. 2319. 2320. 2321. 2322. 2323. 2324. 2325. 2326. 2327. 2328. 2329. 2330. 2331. 2332. 2333. 2334. 2335. 2336. 2337. 2338. 2339. 2340. 2341. 2342. 2343. 2344. 2345. 2346. 2347. 2348. 2349. 2350. 2351. 2352. 2353. 2354. 2355. 2356. 2357. 2358. 2359. 2360. 2361. 2362. 2363. 2364. 2365. 2366. 2367. 2368. 2369. 2370. 2371. 2372. 2373. 2374. 2375. 2376. 2377. 2378. 2379. 2380. 2381. 2382. 2383. 2384. 2385. 2386. 2387. 2388. 2389. 2390. 2391. 2392. 2393. 2394. 2395. 2396. 2397. 2398. 2399. 2400. 2401. 2402. 2403. 2404. 2405. 2406. 2407. 2408. 2409. 2410. 2411. 2412. 2413. 2414. 2415. 2416. 2417. 2418. 2419. 2420. 2421. 2422. 2423. 2424. 2425. 2426. 2427. 2428. 2429. 2430. 2431. 2432. 2433. 2434. 2435. 2436. 2437. 2438. 2439. 2440. 2441. 2442. 2443. 2444. 2445. 2446. 2447. 2448. 2449. 2450. 2451. 2452. 2453. 2454. 2455. 2456. 2457. 2458. 2459. 2460. 2461. 2462. 2463. 2464. 2465. 2466. 2467. 2468. 2469. 2470. 2471. 2472. 2473. 2474. 2475. 2476. 2477. 2478. 2479. 2480. 2481. 2482. 2483. 2484. 2485. 2486. 2487. 2488. 2489. 2490. 2491. 2492. 2493. 2494. 2495. 2496. 2497. 2498. 2499. 2500. 2501. 2502. 2503. 2504. 2505. 2506. 2507. 2508. 2509. 2510. 2511. 2512. 2513. 2514. 2515. 2516. 2517. 2518. 2519. 2520. 2521. 2522. 2523. 2524. 2525. 2526. 2527. 2528. 2529. 2530. 2531. 2532. 2533. 2534. 2535. 2536. 2537. 2538. 2539. 2540. 2541. 2542. 2543. 2544. 2545. 2546. 2547. 2548. 2549. 2550. 2551. 2552. 2553. 2554. 2555. 2556. 2557. 2558. 2559. 2560. 2561. 2562. 2563. 2564. 2565. 2566. 2567. 2568. 2569. 2570. 2571. 2572. 2573. 2574. 2575. 2576. 2577. 2578. 2579. 2580. 2581. 2582. 2583. 2584. 2585. 2586. 2587. 2588. 2589. 2590. 2591. 2592. 2593. 2594. 2595. 2596. 2597. 2598. 2599. 2600. 2601. 2602. 2603. 2604. 2605. 2606. 2607. 2608. 2609. 2610. 2611. 2612. 2613. 2614. 2615. 2616. 2617. 2618. 2619. 2620. 2621. 2622. 2623. 2624. 2625.

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1. The first part of the document is a letter from the President of the United States to the Congress, dated January 1, 1861. It is a copy of the original letter, and is signed by Abraham Lincoln.

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**Briefe Demonstrations of Certaine, Plaine**

and Easie wayes, and meanes for the Improving of any manner of Barren-Land, although not worth xij. <sup>s</sup>. the Acre, and shewing how to make the same become worth xx. s. xxx. s. or xl. s. the Acre yearly.

*Published for the benefit of the Nation, and for the Increasing of the wealth and Prosperity of all Nations,*

*that shall in time Practice the same.*

*By J. S.*

*One that is desirous of the Publicke good.*

**TO THE READER.**

**G**ENTLE Reader, having many things to make publick for the good of the Nation, I shall onely at the present briefly Demonstrate some few things that may make much for the Publicke good and the Prosperity thereof; In this small and ensuing Treatise, it is intended for the good of the Poore aswell as of the rich; and therefore, I shall in briefe publish no more at one time then what the poore man may be able to purchase and attaine to, aswell as the rich, and so shall proceed in the succeeding times; Every one is bound in duty to imploy and improve those Talents that God hath endowed them with to his glory and the publick good, and I hope no man can be offended thereat: if any such there be, they ought to know their Errour is great, and their judgements will be great at the great judgement day of the Lord: I shall Conclude only desiring the Lord to blisse and prosper all honest and lawfull Endeavours, and rest alwayes desirous of the Publick good,

**J: SHA:**

**A**

## Concerning the use of the Manuring- Roller

**O**f all Inventions for the easie and speedy Manuring of all sorts of Ground, there is none better or more usefull then the *Manuring Roller*, being rightly and seasonably used: The best season for using thereof is in the *Autumne* and *Winter*, when the ground is wet and not dry or hard frozen: Also, when the *Snow* beginneth to melt and the frost to thaw, the manner how to use it, is to fill it with Dung and other soyle, or with good and fertile Earth, and then to draw it up and down in your field from one end to the other, untill all the manure be vented out of the same, and then againe to fill it, and use it after the same manner, untill you have used and spent all your dung, hereby one load of Dung will do more good and improve your Land more then 3, or 4. Load laid on the ground, and spread after the accustomed manner: Also, ground that is not worth xij.d. the Acre, may in few yeares be made to become worth xx.s. or xxx.s. the Acre.

These manuring *Rollers* may be made of what bigness you please; for they may be made no bigger then for a man to drive or thrust afore him, and also they may bee made so bigge as they may require one or two Horses to draw the same.

Now if the later end of the *Autumne* or *Winter* season prove dry, and the ground be too dry to Manure and improve the same then you may moisten and water the same, as is declared in the *Chapter, Shewing how to water Ground in dry seasons where water is plentifull*: And in moistening, or watering the same, be sure to moisten and water no more then you shall at that present manure well with your manuring *Roller*, and water that well, and thoroughly that you would Manure.

Also, if you would Improve any barren Land speedily then you must bring in the best mould you can get, and spread the same.



same all over so much of your barren Land as you desire to Improve, and after you have spread the same, then to fill your manuring *Rowlers* with Dung or other good soyle; and manure the same when the ground is Wet as is before prescribed.

Also, it is very expedient to Plow up your barren ground, if you have not plenty of good Earth to lay upon it and to manure it withall, and assoone as it is Plowed up, then to manure it with your manuring *Rowler*; And what you Plow up one day, you should Manure the day following.

## CHAP. II.

*How to improve Barren Land not worth yearly xij. d. the Acre, and to make it become worth yearly xx. s. or xxx. s. the Acre.*

**O**Ne of the best and surest wayes to Improve any manner of barren Land both speedily and effectually is by making long Furrowes, or Trenches, eyther with the Plow or Spade 12. or 18. Inches deepe, and 12. or 18. Inches wide: these furrows and trenches should be made along fro the South to the North, &c distant some 14, 15, or 16. foot each furrow or trench from the other: these furrowes being thus made should be filled up with the best and richest Earth or soyle that may be got neare to the said barren land: and after they are thus filled, then at the season of the yeare for Planting, then to plant Quicksets, and all other small Plants of divers kinds all along in the said Trenches and furrowes; or otherwise to set or sow Acornes, Nuts, Hawes, and the seeds of other Trees in the said Trenches and furrowes that it may grow up to a Hedge-row or hedge, and so to preserve them and let them grow.

Now in the Spaces between the said furrowes you may practise severall points of Husbandry in manner following: as in one or 2, or 3. of the said Spaces between the said trenched or furrowes, if you would have Meadow ground or Pasture, then when the ground is wet eyther with Raine or with Snow,

you must manure the same with the manuring *Barrow*, or manuring *Kowley*, they being filled with the richest or fattest Earth you can get untill the said Spaces become all mire and dirt; and after that bring the best Greene Turffe you can get in Lanes, or along by Hedge-sides, from whence the same may be best spared into your said Barren ground, and spread the same all over the said spaces between the trenches covering the said barren ground therewith, that you would have to be good Meadow or Pasture ground; and after that fill your manuring *Kowley* with good mellow Dung and manure the said spaces therewith; In the *Winter* seasons and a little before the *Spring*, and so every Winter season when the said ground is moyst, and it will become good Meadow or Pasture ground worth xx.s. or xxx.s. the Acre or more, and continue so for ever.

Also, you should have a great care that no Cattle that will Crop come into the said ground before your Quicksets and Hedge-rows be growne out of danger; and therefore you must preserve the grasse for Hay, and in the *Autumne*, and *Winter* you may put in your Lambes, Calves, and Colts, and any other cattle that will not Crop, and it will breed them up very well and yeeld you profit enough.

Now in the other Spaces you may use & practise other points or kinds of Husbandry at your pleasure, that are or hereafter shall be published; for in some of them you may set and sow Beanes, and Pease after the same manner as is declared in the following *Chapters*. And in the other Spaces you may plant and set young Trees; In other spaces you may sow Roots, as Turneps, Carrets and such like, having manured, prepared and fitted the said ground and spaces for the said purposes.

And in other of the said Lands and spaces having moveable Folds made for the purpose to fold your Cattle in, you may fodder any Cattle you have in the said Lands, and improve it very much, and also improve your Cattle, by defending them from wind and weather in Cold seasons.

These

These moveable Folds are to be made of the lightest wood and boards as is to bee obtained, as of Elme, Maple, Sallow, Willow and such like; also, those that shall desire to see the same, or onely the Modell of them, or to have them made, if they shall resort to such places, whereto they shall be directed in this Booke; they may there see the same or bee furnished with them if they please.

### CHAP. III.

*How to Improve any Barren Land not worth xij.d.  
the Acre.*

**A**Nother way to Improve any manner of barren Land both easily and speedily; Is first to make long Furrowes from the South to the North and fill them up with good rich and fertile Earth, as is declared in the former *Chapter*, and then to set Beanes or Pease in their season all along in the said furrowes; and then all along in the Space betwene the said furrowes to make Holes eyther with a good round Stake or crow of Iron about 20, or 22. Inches deepe, the wider the holes are the better; then fill up the said holes with the best Earth or mixed mould as is before declared for the Furrowes; and set Beanes or Pease in the said Holes.

Now after you have gathered your Beanes and Pease, you may let the Stalks and hanes remaine and rot upon the ground, and then in the next wet Seasons ensuing, manure the said ground with the manuring *Romlers* filled with Dung, or other good Earth, or fertile mould, that may most easily be had.

If your Barren ground be somewhat dry that you would manure, then it will be worth your labour to naile or fasten all the course old Linnen or woollen Rags doubled or twisted together you have or can have, round about on the our-side of  
your

your manuring *Rowler*, and then powse water upon them when you manure your ground therewith, and also you must moysten cyther the Dung or the fertile Earth very much with water, when that you put it into the manuring *Rowler* to manure your Land therewith; and so when the Rags shall grow any thing dry to wet them well againe with water, by powring it upon them.

Also, it will be worth labour and very good to Manure your ground early in the Morning when the ground is very full of Dew, with the manuring *Rowler*.

The severall Benefits that will arise to all in the Nation will be many through the exercise of these points of Husbandry some whereof I will name; As first, all or most of the Poore in the Nation may be set on worke in one kind or other thorough our the Nation, to the great profit of the Owners of the barren Lands in the Nation; some being employed in making Trenches, Pies and holes, others in filling them up with earth, and others in Planting, Sowing, and setting Plants, or Seeds, or other things as is prescribed.

Secondly, The maintenance of the Ministers and Gentry will be amended and increased.

Thirdly, The Marchants, Tradesmen, and Handicrafts-men, will gaine hereby; for all Trading will be increased.

Fourthly, the Customes, and other revenues due to the State will be increased.

#### CHAP. IV.

*Another way whereby Barren-fields may be improved.*

**F**irst, you may plow Furrowes from one end or side of your Field unto the other, and fill up the same with good fertile mould of Earth, if you desire to improve your Land by sowing or setting Beanes, Pease or any other kind of graine in Furrowes, and not by planting of Wood.

Also, you may Plow the said fields very well and to Harrow them, and then manure them with the manuring *Rowler*,

and after plant and set Corne in the same ; making holes with a Setting-stick made for that purpose, and putting in with your Seed fine small light mould that is sifted into the said holes, filling them up therewith.

And after when you have gathered your Crop, then in wet Seasons if the ground be wet manure the said Fields with your manuring *Rowlers* well filled with Dung, or other good soyle, and your said fields will be extraordinarily Improved, and made fertile.

#### CHAP. V.

*Another way to improve Barren Land not worth xij.d. the Acre.*

**A**Nother way to Improve any manner of barren Land, is by Digging many holes or small Pits one foot and a half deepe, and two foot square, and then to fill up the said Pits or holes with the best Earth or mould that is to be got neere unto the said barren Land, and then at the Season of the yeare that is best for Setting and Planting to set or plant such small Trees or Plants, as will agree best with the nature of the soyle there layd, and not too much different from the nature of the soyle of the said Climate, and indeed it will be very necessary to observe what Earth, or soyle will improve best the said Barren earth ; For as Oake will grow and prosper best in Clay grounds, so Elmes will grow and prosper best in rich Sandie grounds and other Dry moulds, and other sorts of wood ; In other sorts of ground, as Willowes in wet grounds, and Ash, Maple, Beech ; and indeed most sorts of Wood will grow in mixed moles and Loamy grounds.

Now then it is expedient that such Persons as will use these or the like wayes in Improving of these Barren grounds, doe observe the natures of such barren ground as they desire to improve, as to observe whether it be wet Moorish grounds, or dry Sandy barren ground, or Chalkie, Gravelly, or Clay, or loamie ground ; for as there be rich Sandy grounds, so there

are



are barren sandy grounds, and as there be rich Loamic, gravelly and Clay grounds, so there be barren loamy, gravelly and Clay grounds. Now if you make your Trenches or little Pits in dry barren Sandy ground, then to fill the said Pits and trenches with the richest Clay or loamy Earth you can get, & also to manure the said ground with the same, and if you make your said trenches and pits in wet or Moorish grounds, then to fill both the trenches and pits with the fattest Sand, or dryest rich mould well Chaulked, or you may put some Chalke into the said trenches or pits before the said Sand or Rich dry earth be layd in the same, and to manure the said wet ground with the like, spreading much Chalke or sand upon the said Moorish, or wet grounds. Now by this kind of Husbandry great profit will arise to the Owners of the said barren Land, and also to the Common-wealth and Nation; for hereby all sorts of Timber will become plentiful for all uses.

These holes and Pits may be made as neere together as the Planters shall please, for as the said Trees grow up and spread some may be Cut downe and taken away to the owners profit and others left to grow and spread, and alwaies when they shall want space to spread and grow then to fell and take away some more, leaving others to continue growing untill they shall come to their full growth; Thus may barren ground that is now worth xij.d. the Acre, be made to bring in great profit, and be Improved from generation to generation, and in the end when all or most of the Trees be felled or taken away it will become and continue good Arable or Pasture ground for ever, if it be yearly Manured in its season as it ought, and may easily be done.

FINIS.

**A**T the House of  
There you may see the Exact modell and manner of the improving  
Inventions, and receive further instructions for the improving  
any manner of Barren Land if you please; and also be directed  
such Persons, as will either buy or farme any Barren Lands, that  
you shall be desirous to Sell or Let.



HOW  
**TO ORDER ANY LAND, SO**

as it may reteyne all the moysture

that falleth thereon: And to im-

prove it thereby.



Or as much as the fatnesse of the soyle is washed away, when in the winter season the ground is so wet, that every snowe is not received, and drunke in by the earth where upon it falleth, but passeth away, and carrieth with it the Farnesse, and Richnesse of the soyle that should remayne vpon the superficies of the earth, whereby barrennesse doeth ensue daily, although daily the Husbandman doe manure and dung the same: Therefore every one that would reteyne the Farnesse and Richnesse of their owne soyle for their owne Land, must use meanes to reteine that, that would and doth carry away the Richnesse and Farnesse of their soyle from the same. And that every man may reserve the Farnesse of his owne soyle for his owne Land, it is necessary to use and practise these points of Husbandrie hereafter declared. As first to ground his Land with banks in every place where the water may have vent, and Current from of the same: secondly, to turne the vent and Current of all Land-water into his owne ground, out from the high wayes, waile-grounds, and Commons belonging to or lying neere his owne Land, and if these two shall not be found Remedies sufficient, I shall hereafter declare some other. I know the latter is practised a little by some, but it is so little that it is to little purpose. For what availeth it for a man to let the water in at one place

place, and to let it goe out at without, but every man re-  
ceyving all the water that fallch upon his owne ground,  
shall in short time finde it very available, for if this kinde  
of husbandrie onely were practised halfe the time that it  
hath beene neglected, men should finde their Lands to  
bee greatly Improved by the same, the which every one  
may easily doe, and that to their owne great profit and ad-  
vantage, and to the profit and advantage also of their farre  
Remote neighbours.

For if every one doe but consider how divers grounds  
hath beene much Improved by watering, and overflowing  
the same neere unto Rivers, that in former times have  
been but little worth, then they cannot deny, but that they  
also in high grounds may improve their Land by water-  
ing and overflowing the same, and that they may overflow  
it by stopping the vents and Currents of the water that  
shall fall upon the same, or when they shall bring the land-  
water upon the same from their owne Corne Fields, high-  
ways, and other wast grounds and Commons.

Also, then will not their farre Remote neighbors, that  
use to bee annoyed with floods, and others that live in  
Flood Countries, bee so much annoyed with water as  
commonly they are, nay, if every one did but truly and  
duely observe and practise this kind of Husbandry, they  
would not be annoyed at all: and therefore it must needs  
bee advantageous and profitable for those that live in Floo-  
dy Countreyes, and others in the vale Countreyes that are  
annoyed with Floods, as well as for those that live upon  
hilles and high grounds.

Now how easily it may bee effected, may any one soone  
understand, that can but understand how easily mischeifes  
may bee prevented, when they are prevented at the first ris-  
ing and beginning before they come to a head, and how  
easily

easily an Inconvenience may bee helped which every man  
 shall put to their helping hands any one may judge. Wee  
 know that the many sparkes of fire in Towne and Citie, so  
 long as they are kept within bounds are service able, and  
 there is no damage or danger suffered by them; but if  
 by misfortune or negligence they get out of their bounds  
 what disasters doe they cause. Even so the many drops that  
 doe fall in a Countrey if they should bee kept within  
 bounds in the severall Closes and Lordships wherein they  
 fall, they would be serviceable, and advantageous, which  
 other wayes destroy whole Feilds of Corne, breake downe  
 Bridges, drowne Cattle, and sometime overturne houses,  
 and work much other mischiefs also, for we may all very  
 well know, it is never well with *England* when the Corne  
 in the golden vales of *England* is destroyed through floods;  
 now as the Husbandman may easily receyve all the water  
 that falleth upon his owne ground for his owne profit and  
 advantage, in his severall enclosures, so may he as easily o-  
 pen a vent for his water at any time if there be cause and  
 let it out from one Close, wherein there is no need, or  
 where it may be harmful and bring it into another where  
 in it may doe good, and where there may bee great need  
 thereof: now if there be any that cannot conceive how or  
 which way this point of husbandry may be effected with  
 great facility and ease: let them but repaire unto the Au-  
 ditor, or unto his Assignes; and they will after taking view  
 of their land show how easily it may be done.

*How to prepare barren Land that yeeldeth no profit, for  
 the improving of it, and how to make it Fertile.*

**T**he first thing to be done when you would improve  
 your barren dry ground, is where it is levell, or where  
 it can be easily brought to a levell, to mound it about

A 2

in squares,

In square plots & Clofes, or otherwayes, as it shal be found  
most convenient with bankes. In such manner as that you  
may receiue and keepe all the water or moisture within the  
bounds thereof that shall fall up6 it, or that may arise from  
Snow, or that may oserwise be brought upon the same.

Thus when it is well bounded and mounded with bankes  
may you dung it well, or manure it in what sort you like  
best, and you shall be sure not to loose any part of your  
dung or manure through hastic and sudden showers, that  
commonly doth wash away a great part thereof.

But when it is dunged well, and well soaked with moy:  
sure, or when it is in a manner overflowen, then to ma:  
nure it with dung or other Fecursh in the Manuring bar:  
row will mightily improve it, for the drawing of the  
manuring barrow up and downe, and the trampling of the  
ground when it is so moyst, or overflowen, will increase  
your manure, and dung exceedingly: Forne man can be  
Ignorant how trampling, Caruing, and such like actions in  
wet weather, and when the ground is wet doth increase  
moyre and dirt exceedingly in any place: Yet some may  
object, why then are not Foot-pathes, and High-wayes  
more Fertile then other places, being they are more fre:  
quently trampled, and travailed upon then other places are.  
Vnto whom I answer, if highwayes and Footpathes were  
trampled, and travailed on onely in wet weather, and  
when they are wet, they would be farre more Richer in  
soyle and more fertile then they are, for as trampling and  
travailing in wet weather increaseth soyle and Dirt, so in  
dry weather trampling and travailing, wareth and wasteth  
away both the Dirt and soyle, and causeth Barrennesse  
and yet how many wayes and pathes also if they should  
not be yearly supplied with gravell, and such other barren,  
and durablc

durable materials would grow Impossible through myre & soyle. Also although trampling and travailing is good to improve ground, yet continuall trampling, and travailing is hurtfull to ground, because it hindereth the growth of the grasse, and yet in Heathes, and Commons, where are pathes, and tracks that are but seldome trampled, is no heath, yet is there grasse, and more would there bee if they were not overlaid with sheepe, and Cattle, and trampled more in dry weather, then in wet that keepes it under, and hinders the growth thereof.

Againe, to manure ground that is dungen when it is wet, with the Manuring barrow trimmed also with dung, or other Fat earth, or soyle, will increase other manner of soyle and Dirt, then bare trampling or travailing will, and also it will improve it more. If there be any that thinke drowning and overflowing of ground will not improve it, because in some places they are faine to cut Furrowes and trenches to draine the same, let them inquire of those who have used the overflowing of ground that lyeth by Rivers, and have improved the same, and use it yearly. Indeed arable ground when it is sowed should have Furrowes, and trenches to draine the same, because too much moisture is hurtfull to most kinde of graine, and therefore they should make their Furrowes so, as that the Raine that falleth upon their Cornfields, may have vent and Current into their pasture ground and lay Eclds, and then they may there environ it so with a banke, as that it may not any way breake forth of the same. Thus therefore, if it be one, two, thres, foure, or five Acres, or more that you would improve, thus you may order and prepare it, and improve it, and unto any who willet or desireth to learne more, I will yet shew him divers more excellent wayes.



*of the severall benefits that will arise from Mending of  
ground with banks and stopping of Currents  
of Land waters.*

**I**T will mitigate the great Floods, If it cau-  
eth them not to cease altogether, that so annoy-  
eth the Fennie Countreys and other places.  
It will improve high grounds, and cause plen-  
ty, and prevent dearth and scarcity.  
It will increase the old Springs, and make new springs  
to breake forth, and arise in divers places, and that especi-  
ally, If having more Land-water in any place then can be  
retayned vpon the same, they make deepe pits or wells for  
the same to run into, or if they turne the Current of their  
water vnto their dry and thurkie Lands, that will receive  
and drinke in all.

Hereby also they may store themselves with water to  
the dry and upland Countreys against the Summer times  
and dry seasons, where they haue any gravelly, or Clay  
Ground.

*Arguments shewing whether this point of Husbandry bee  
possible and profitable or no.*

**B**Ecause a man cannot speake of any new  
wayes or points in Husbandry, but divers  
well experienced men, doe perfectly judge  
the same to be Impossible, or else unpro-  
fitable. I will heere breifly discusse these  
two Questions: that so every one that  
will, may conceive how possible and profitable they may  
bee. First, to shew the possibility thereof, let any one place  
a leaking vessell in the raine, where no spoutes may runne  
into



into the same, and see if it will ever be filled with the same  
that shall descend therein. For all sorts of ground will not  
hold water, and may bee compared to leaking vessels, ex-  
cept onely the gravelly, and the Clay ground, so that if  
men doe but banke their ground a litle to keepe the water  
that falleth thereon upon the same, It will not long abide,  
if it should descend never so fast vnlesse it be in gravelly  
Clay grounds. And here I know many will say that we  
not practise this point of husbandry without damming  
themselves, because of necessity where there is no dry thir-  
sty Land neere, and abundance of Clay or gravelly ground,  
altogether in one place must drowne some of their owne  
ground if they should stoppe the vent and Current of the  
water, and receyue all the water that falleth thereon upon  
the same, unto which I answer, although men in some pla-  
ces should drowne 3 or foure Acres in an hundred Acres,  
yet they cannot be dammed thereby, because those who  
know what a pond of an Acre, or more is worth, cannot  
be ignorant that 3, or 4, Acres of Land thus drowned in  
some places, may yeeld more commodity then ten Acres  
of dry Land that is worth 30. shillings the Acre.

Againe for the generall, better is it to have some hun-  
dreds of Acres drowned, and made Fish-pooles, then to  
have many thousands of Acres lye barraine, and unfruit-  
full.

And that such places will be as storehouses for water, a-  
gainst the summer times and dry seasons, no man can de-  
ny, for whereas I have spoke of watering of ground in dry  
seasons where water is to be had, and some have asked how  
they should provide water, here is one way, whereby they  
may provide water in hilly Countreys, and high grounds  
farre off from Rivers. And although it may be impossible  
for any one man to receyue the water within his owne  
ground.

ground that falleth in many such Lands; yet is it possible  
for every one to enjoy the water that shall fall within  
his own ground. And therefore not impossible.

*A briefe Answer unto what may be objected: or hard  
lynes objected.*

**I** Know many there bee, that will say they know  
many more excellent points of husbandry, then  
yet hath beene discovered by mee, and I must  
confesse, I know many particular Husbandmen  
that doe conceive, and understand those secrets in husband-  
ry, that generally is not conceived, nor understood by  
many that use husbandry, the which I have forborne to  
treat of, because I would not seeme to discover, what I  
know to bee understood, and practized by any one already,  
although I am not ignorant of the same; and that di-  
vers husbandmen and others, doe know divers more excel-  
lent poynts then hath beene discovered, I will beleefe. For  
I my selfe know many more excellent poynts then I have  
yet discovered, and yet I know and beleefe that divers that  
shall succeed unto this generation shall know, & understand,  
and discover more, then shall be vnderstood, and discovered  
by any one in this generation. Now to avoid further Con-  
troversies, if there be any that shall thinke, or object, that  
any one point herein discovered, is vnpossible, unprof-  
itable, or not worth the practizing, let them but help the  
Author vnto any barren Land and they shall soone see  
the contrary proved, for their satisfaction.

And whereas some I know will be apt to object, That  
the water lying upon the ground in the winter season, will  
breed Rushes, and Sedges; I answer, the Manuring Barrow  
(if it be trimmed and used as it may bee) will keepe the  
ground from bearing of Rushes and Sedges; and also it  
will kill both Rushes and Sedges in any ground that is na-  
turally inclined thereunto.

AN  
EASIE AND PROFIT-  
TABLE ORDER IN TIL-  
ling of Ground to improve it, and  
make it Fertile.



Because all things in this World are subject to  
casualtie, and *Husbandry* and *Tillage* although  
it be a principall stay, and supporter both in  
the Church and Common-wealth, yet doth  
it not alwayes hit according to the *Husband-  
mans* expectation, but oftentimes doth faile,  
unto his great losse, and the miseries of others:

I shall here discover some certaine points in *Husbandrie*, where-  
by the *Husbandman* may easily succour his *Corn* after it is sown,  
and use such meanes and wayes that he may preserve and foster  
it, if need so require.

Now the most certaine way in *Tillage*, not to loose both your  
seed and labor (as many often have done in dry seasons, and are  
still like to doe, if they hold on in their accustomed *Tillage*)  
when the season is like to be dry, is to *Till* your *Ground* by *Lands*,  
leaving alwayes a space untilld betweene every *Land*, that so  
you may have places whereby you may come to moisten, and  
succour your *Seed* untill it be well come forth and growne, if  
the season be dry, and you perceive it doth not come forth

kindely as you would have it, this is a point of *Husbandrie*, that will be extraordinarie usefull where any *Barren* ground lyeth neare unto any Rivers, where water may plentifully be had, and it will not be unusefull where good ground is, although there be not such plentie of water: but some *Husbandmen* it may be will be apt to thinke, that so much ground that yeare is lost that is left untill'd in a Field that is tilled; but it is easily answered, that better a little ground be lost, then a greater quantitie of ground, and your cost and *Seed* also be lost, as it may be sayd well to be, if it doth not bring forth a crop proportionable unto the place and charge bestowed thereon, but to speake the truth, the ground is not lost that is left untill'd, because of it selfe it will bring forth some benefit: although it be not sowne, and that, that is not sowne the one yeare doth gash heart, and will be improved against the next yeare, for if you diligently succour your seed-plots with water, and some such other means as you shall see needfull, the *Invention* that you may water your tilled ground with, will also at the same time water your untill'd spaces, so as that, what with the watering, and with the trampling, your untill'd spaces will be well improved thereby. For watering, and trampling of ground when it is moist, will improve any ground, without any other means, neyther may any *Husbandman* sow one jot the lesse, for what quantitie of ground he leaveth unsowne in one Field, he may sow for it the same quantity in another place, and in the same manner, if he thinke well, and in thus ordering, and sowing of his ground he shall finde more certaine profit then any other way.

The breadth of the *Lands* that in this manner are to be tilled, may be 6, 7, or 8 foot in breadth, and the space betweene each land that you are to leave untill'd, may be a foot and a halfe, or more in breadth if you see cause: thus may you without doing harme to your Corne at any time as you see cause, both nourish and cherish it up, from the first sowing thereof untill it be past

all danger that may befall it through drought; for when it is sprung up to some pretie growth, the blades will defend the counter thereof so from the heat of the Sunne in dry seasons, that it will not take any extraordinary harme thereby.

Allo this is to be noted, that those spaces that you leave unplowed one yeare, if you sow the same *Field* the next yeare, you are to plow up, & leave now some part of the lands (that the last yeare were tilled and sown) for to be the spaces between the Lands that you mean now to till & sow: and so every yeare you may rest some part of your *Field*, although every yeare you sow the greater part, and reape good crops of Corne from the same.

Now to give you some taste whether this point of *Husbandrie* will be advantagious or no, let every *Husbandman* first cast what an Acre of *Corn* is worth standing upon the Ground, and then how many Acres thereof may be watered in a day; unto the first question I can answer, I have knowne an Acre of Wheat to have been worth ten pounds upon the ground, when Corne hath been at an high price, but I will suppose it to bee worth now but 40 shillings, or 2 pound the Acre: Vnto the second I will answer, where water may easily be had, a couple of men may well and easily water about some 30 Acres a day, when the dayes be long, and if it be watered well but every other day, and the ground be any thing good, or well manured, it will come forward; and by this reckon, two men may cherish 60 Acres and bring it forward, watering the one halfe well one day, and the other halfe another day; and 60 Acres according unto the lowest rate amounteth unto 120 pound, & at 3 pound the Acre, it will amount unto 180 pound: and how much soever an Acre of any Corne can be worth, an Acre of Corne well tilled and thus cherished, will come to be worth much more than that which is but slightly tilled, and that never after is helped or cherished any wayes. Now if a Couple with two or three Monthes labor (for I suppose in two or three Monthes



the *Corn* will be indifferently able to defend it selfe against the heat of the *Sonne*, and will be come so forward that it will need any further watering; can thus bring such profit out from the earth, I suppose it will recompence their labour, and be an encouragement unto any to proceed with pleasure and delight in a labour so advantageous for themselves, and so much concerning the publicke good; neither will this labour fall upon the *Husbandman* at an unreasonable time. For alwayes after *Seed time* hath the *Husbandman* most leisure, & after *Seed time* then is the most seasonable time thus to cherish your *Corn*, & it is not to be doubted, but that oftentimes there will fall some shower or so, that will both helpe and ease the labor of the *Warerers*, in the driest time and season of the yeare: For I for my part am perswaded that in mens honest and good endeavours there is silent Rhetorick to perswade with God, and yet I would not have any man to be silent in a time of necessity, but I leave that for Divines to teach and perswade, and stirre up men unto.

Now such *Husbandmen* that have not a manuring *Plow* or *Seed-barre* ready, may till their Land in this order after the old accustomed manner, if the Land be not extraordinary barren. For if it be extraordinary barren, then they must use the *Manuring-Plow*, or *Manuring-Wagen* in Tilling and Sowing the same, or else perhaps they may lose much of their Crop, or at least never improve it so orderly by sowing the same: Neither is there a better, nor more easie and speedy way to improve any arable ground, or to make any barren Land to become good arable Land then by thus ordering, and sowing of the same, any one may quickly finde that shall but once make tryall of some little parcell of barren ground in any place.

Now if there be any that can helpe the Author unto a reasonable quantitie of barren ground, he will further discover unto them how they shall improve both easly and speedily the barren ground, and make it to become good *Meadow ground*, or



the worth so much yearly, as any *Mediterranean* ground is, or can be  
any place neare adjacent thereunto.

### *How to srowd your Grasse.*

It were one excellent point in *Husbandrie* to set and plant  
beech Oakes and Elmes, all along in a row by the hedges on  
your Field sides, excepting those sides that joyne upon  
common Roads and Highways, that require the Winde  
and Sunne to drie them, and make them passable, for hereby  
you shelter the grasse a great part of the long Summer  
from the scorching heat of the Sunne, and in the Winter  
from the nipping blasts of the cold freezing Winde, and also  
provide fuell for your fire and other uses, and food for your  
cattle, besides many other commodities that would arise from  
the same, for every Spring your grasse would be much more  
warder than it is, and the leaves of the Trees would also help  
fatten your ground, and it were to be wished that there were  
more of *Shaw* to force this point of *Husbandrie*, that so  
the Walles of the Kingdome, and the Bridges whereby such  
armies of our Fore-fathers were wont to passe over the Seas  
might be maintained, and that we might thereby become freed of  
our enemies, that now thinke themselves out of our danger.  
Surely the reason why this *Husbandrie* is not used, is because  
the profit thereof would not presently arise to our selves, but  
every one ought to know that no man is born only for himself,  
but that Fathers are to provide for their Children, therefore  
we would leave our Countrey to our Children, and have our  
Childrens Children enjoy the same, let us then providently  
provide such materials for our Grand-children, that  
they may have wherewithall to encounter with their enemies  
at home, rather then to suffer them to be forced to combate with  
us here at home, surely if any enemy of ours, had any kinde  
of

as Timber so tough and durable as our English Oaks they are not neglect so great a benefit: O then unlesse we would let our Enemies to succeed us in our inheritances let us make use of the benefits and priviledges that our good God hath bestowed upon us above other Nations.

*How to Gather Tobacco, Rye and Barley in Late Harvests, and to preserve them from Spoyle.*

**I**N Harvest-time when the Corne is full ripe and like to be and the season so wet that it cannot be housed so drie it should be, ought this point of Harvest to be practised, rather than that the Corne should be spoyl'd or lost; first therefore in such seasons may the Husbandman reape or cut down his Corne according to the Country custome wherein he lives, either afterward whensoever it holds up, or sooner if there be need for his Harvest people (having implements accordingly) to themselves to the cropping, clipping, or cutting off the Eares the Corns by handfulls at a time, little Children may gather Corne into handfulls, and give them to the Husbandman, who he cutteth them off, should put them into Sackes, and then when they be carried home, and spread upon floors in Lodges, or all other places where they may lye and dry, and being drie should they be removed & other brought and should be kept in their places, otherwise whensoever the Weather be a little faire, there may one be assigned to follow every man that may clip off the eares as fast as they shall reape by handfulls, and so sacke them up, and carry them home as fast as it is reaped. Thus may men more easily gather in their Tobacco, Rye, and their Barley, although there should be much grass weeds among the straw, that doeth require much time to be cut and dry before it can be got in, but when they have cut the eares off their Corne, they may let the straw lye a while without sustaining any great hurt, and after they have ther it in and stack it up at leisure, when the season is more